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146106

TECTROL INC

SWITCHING POWER PRODUCTS

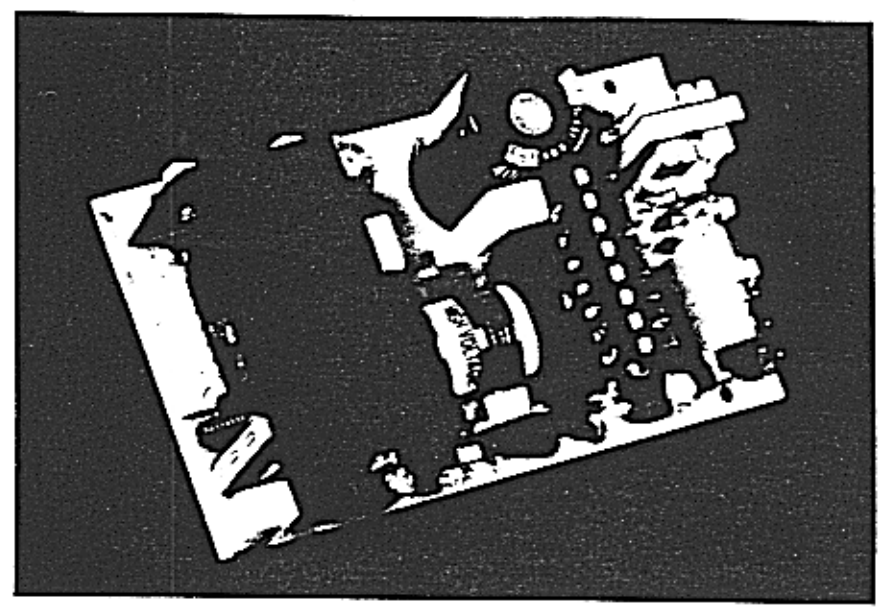
65W

UNIVERSAL INPUT MULTIPLE OUTPUT

TO65 SERIES

STANDARD FEATURES

- Universal input voltage range 90 to 265VAC
- High peak power (90W)
- Low output ripple and noise
- Efficiency greater than 70%
- Current limited outputs and power limiting
- Short circuit protected
- Inrush current limited and soft started
- UL, CSA & TUV approved
- Meets FCC & VDE Conducted EMI standards
- Internal over voltage protection
- Minimum cross-regulation between main and aux rails
- Small size 3.5" x 6" x 1.8" (90mm x 153mm x 46mm)
- Fan output



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STANDARD MODELS AVAILABLE

Type Number	Rated Watts (peak)	OUTPUT #1	OUTPUT #2	OUTPUT #3	OUTPUT #4	NOTES
TO65/10	65 (90)W	5V 6A (10Apk)	+12V 3A (6Apk)	-12V 1.5A	-5V 0.5A (1Apk)	1, 8, 7, 10
TO65/11	65 (90)W	5V 6A (10Apk)	+12V 3A (6Apk)	24V 1A	-12V 1.5A	2, 8, 9, 10
TO65/12	65 (90)W	5V 6A (10Apk)	+15V 3A (6Apk)	-15V 1.5A	-5V 0.5A (1Apk)	3, 8, 9, 10
TO65/13	65 (90)W	5V 3.5A (10Apk)	+12V 4A (7Apk)			4, 8, 9, 10
TO65/17	65 (90)W	5V 6A (10Apk)	+15V 3A (6Apk)	24V 1A	-15V 1.5A	5, 8, 9, 10

SPECIFICATIONS

Input Voltage
Operation range: 90-265VAC or 110-375VDC (1.5A).

Input Frequency
47-63Hz (for 400Hz operation, consult factory).

Switching Frequency
50kHz.

Inrush Current
Less than 30A (cold start).

Holdup Time
20 msec. min. (52W load, from nominal input).

Maximum Power Limit
95 watts typical.

Output Ripple & Noise
(peak-peak) Less than 50mV or 1% whichever is greater .

Output Voltage Overshoot
Less than 0.5%.

Response Time
Less than 500µsec. to within 1%, for a 25% load change.

Switch On Rise Time
Less than 100 msec., for an output rise of 10% to 90%.

Internal Overvoltage Protection
125% of nominal output voltage (note 6).

RFI & EMI
Meets FCC class A & VDE 0871 level A.

Fan Output
Filtered output 12V 200mA.

Efficiency
Approx. 70% at stated load (note 6).

Output Voltage Regulation
±4% all conditions: line, load centering and cross.

Storage Temperature
-20°C to +85°C.

Temperature Coefficient
Less than 0.02% / °C.

Operating Temperature
65 watts to 50°C convection cooled, derate 60% to 70°C.

Size
3.5" x 6" x 1.54" (90mm x 153mm x 39mm)

Weight
0.75lb (0.34kg)

Telephone 416-630-8108 FAX 416-638-0553

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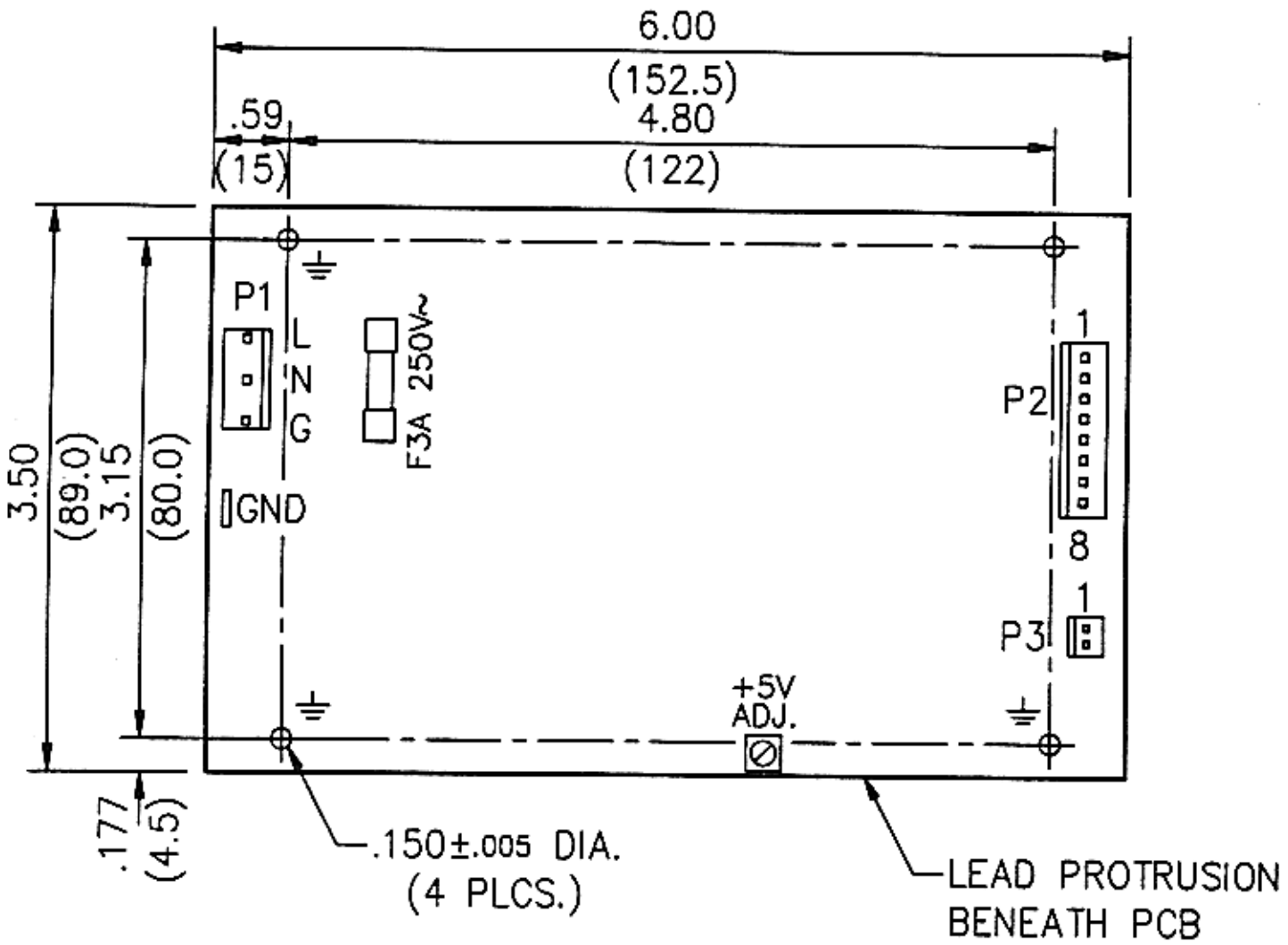
TYPICAL OUTPUT CHARACTERISTICS (TO65/10)

PARAMETER	CONDITION	OUTPUT #1	OUTPUT #2	OUTPUT #3	OUTPUT #4	NOTES
Output Voltage	Nominal	5V	+12V	-12V	-5V	1, 7
Output Current	Working Range	1-6A (10Apk)	0.3-3A (6Apk)	0-1.5A	0-1A	1,8
Line Regulation	65W; 90-265VAC	0.5% max.	1% max.	0.5% max.	0.5% max.	
Load Regulation	60% ±40%	±3% max.	±4% max.	±4% max.	±150mV	9, 10, 11
Cross Regulation	Change O/P1 ±10%	N/A	±1% max.	±2% max.	±0.1% max.	12

MECHANICAL SPECIFICATIONS



P2	
PIN	FUNCTION
1	OUTPUT #1
2	OUTPUT #1
3	COM.
4	COM.
5	OUTPUT #2
6	OUTPUT #2
7	OUTPUT #3
8	OUTPUT #4

P3 FAN	
PIN	FUNCTION
1	COM
2	+12V

CONNECTOR	MATING CONNECTOR	
	HOUSING	TERMINAL
P1	MOLEX 26-03-4050	MOLEX 08-50-0187
P2	MOLEX 26-03-4081	MOLEX 08-50-0187
P3	MOLEX 22-01-2027	MOLEX 08-50-0114

DIMENSIONS
in.
(mm)

HEIGHT
1.80 (46.0)
OPTIONAL 1.54 (40.0)

NOTES

1. Minimum load: 5V 1A, 12V 0.3A, -12V 0A, -5V 0A.
2. Minimum load: 5V 1A, 12V 0.3A, -12V 0A, 24V 0.01A.
3. Minimum load: 5V 1A, 15V 0.3A, -15V 0A, -5V 0A.
4. Minimum load: 5V 1A, 12V 0.3A.
5. Minimum load: 5V 1A, 15V 0.3A, -15V 0A, 24V 0.01A.
6. With loading: 5V 5A, 12V 3A, -12V 0.33A.
7. With loading: 5V 3A, 12V 1A, -12V1A, -5V 0.5A.
   Set point 5V=4.9-5.1V, 12V=11.8-12.4V.
8. Maximum continuous output power not to exceed 65 watts, (90 Watts peak, 30 seconds).
9. For OP/2 (minimum load) to have 4% regulation 5V maximum must be less than 5A.
10. For OP/2 to have 4% regulation at full load, 5V minimum must be greater than OP/2 load current.
11. Other outputs at 60% load.
12. The effects of load and cross regulation tend to cancel out in practice.

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